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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,376	01/26/2001	Nobuyoshi Yagi	Q62053	5759

7590

12/29/2004

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EXAMINER

DICUS, TAMRA

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/769,376

**Applicant(s)**

YAGI ET AL.

**Examiner**

Tamra L. Dicus

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### ***DETAILED ACTION***

The cancellation of claim 2 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear where the surface roughness occurs, e.g. on the multilayer structure or the epoxy resin layer.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 4-5 (amended) stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,500,518 to Sugawa et al. as previously set forth in the Office Action mailed 07/28/04.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims differ only in the recitation of the surface roughness values of 0.8 nm and 0.2 nm or lower is an obvious limitation as '518 to Sugawa provides in patented claim 1 the limitation that claims a smooth surface. While the roughness value of 0.8 nm is not claimed, it is considered inherent since the same epoxy resin is used in the same manner. Further at col. 3, line 40, a surface roughness value is taught within the range of 0.2 micrometers or less, falling within Applicant's range of 0.8 nm and 0.2 nm or lower. The sheet of Sugawa is a functional equivalent to a "liquid-crystal cell substrate" because the same materials are provided.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1 and 3-6 (amended) stand rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,500,518 to Sugawa et al. as previously set forth in the Office Action mailed 07/28/04.

Regarding the new limitation to a “liquid-crystal cell substrate”, the sheet of Sugawa is a functional equivalent to a “liquid-crystal cell substrate” because the same materials are provided. Further at col. 7, lines 1-10, the substrate can be used for liquid crystal cell substrates.

Regarding the new limitation to “the multilayer structure comprises a layer of a cured epoxy resin as a base layer”, Sugawa also provides. Applicant teaches the epoxy is (7) in Figure 1 of the instant disclosure being an outer layer, and Sugawa teaches (62) as an outer cured epoxy layer. Thus the cured epoxy resin functions as a base layer. See col. 2, lines 40-53.

Claims 1 and 3-5 (amended) stand rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,136,444 to Kon et al. as previously set forth in the Office Action mailed 07/28/04.

Regarding the new limitation to a “liquid-crystal cell substrate”, the sheet of Kon is a functional equivalent to a “liquid-crystal cell substrate” because the same materials are provided. Further Kon teaches the invention used in liquid crystal displays just as Applicant describes a “liquid cell substrate” to be formed and used (page 12, 1<sup>st</sup> complete paragraph). See col. 21, lines 55-col. 22, line 26.

Regarding the new limitation to “the multilayer structure comprises a layer of a cured epoxy resin as a base layer”, Kon also provides. Applicant teaches the epoxy is (7) in Figure 1 of the instant disclosure being an outer layer, and Kon teaches 9 and 8 as outer layers above the

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substrate of polycarbonate. See Figures 3 and 4 of Kon. Thus the cured epoxy resin functions as a base layer. See col. 15, lines 3-18.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,136,444 to Kon et al. in view of USPN 6,261,664 to Beeson et al. as previously set forth in the Office Action mailed 07/28/04.

***Response to Arguments***

Applicant's arguments filed 12-02-04 have been fully considered but they are not persuasive. Applicant discussed the instant invention in an interview 12/15/04 and in the Remarks of 12/02/04 argues that Sugawa does not does not teach the claimed range of 0.8 nm or lower pointing to the table submitted in the Remarks. Applicant points to the teaching of 0.02 micrometers (0.2 nm) or less achieving a "smooth" surface but argues this teaching is significantly different from 0.8 nm or lower because Applicant alleges the claimed range is lower despite the use of epoxy. Applicant argues Sugawa does not teach the surface roughness because

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of a thickness precision. However, thickness precision is not claimed, but if the Applicant believes this will differentiate the claimed invention from the prior art, he is welcomed to include in the claims. The Examiner upholds the Double Patenting and 102(e) rejection over Sugawa because patented claim 1 teaches the same epoxy base, thickness range, and claims the sheet is smooth. "Smooth" is interpreted in light of the specification, which Applicant agrees is 0.02 micrometers or less explicitly taught at col. 3, lines 40-41 equating the roughness to the smoothness of a mirror (same as Applicant's teaching within the instant disclosure at page 4, line 2). This range is encompassed by Applicant's claimed range. Applicant has not claimed a "much narrower" claimed range as alleged as zero is included in "or less/lower". Applicant is also invited to submit objective evidence via an affidavit to support Applicant's arguments that the instant invention is not the same as the prior art teaches.

Applicant has amended the present claims to a "liquid cell substrate" and argues this name is to the use of the claimed substrate as a liquid crystal cell substrate and points to Examples within the Specification. However, this new name does not differentiate from the Prior Art of record because the same materials, roughness values, and thicknesses are provided for. Moreover, Applicant has not claimed a liquid cell in any of the claims, but is free to do so if supported by original disclosure (see instant Applicant page 25, 1st paragraph). However, both Sugawa and Kon clearly teach the use of the resinous substrate as a liquid crystal display and forms liquid crystal cell substrates using liquid crystals as Applicant as aforementioned above. Kon is still used to teach the same structure, materials, thickness, and roughness properties as set forth above. Applicant argues the 102(e) based on Kon, alleging Kon does not describe the surface roughness of the uppermost layer. However, Applicant appears to not have considered

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the explicit teaching at col. 18, lines 36-40 teaching the aforesaid property is indeed on the uppermost layer- the "air side", which is the same "air side" as applicant shows in the disclosure (Figure 1, layer). Applicant argues Kon does not teach the epoxy as a base, however, Applicant teaches the epoxy is (7) in Figure 1 of the instant disclosure being an outer layer, and Kon teaches 9 and 8 as outer layers above the substrate of polycarbonate. See Figures 3 and 4 of Kon.

Applicant argues the 103 over the use Kon and Beeson. However, as set forth, Kon teaches the same materials, thickness and roughness properties as claimed (see Figure 4). Beeson is an optical structure just as Kon, and Beeson is merely used to teach bisphenol A is conventional to add.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

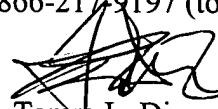


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

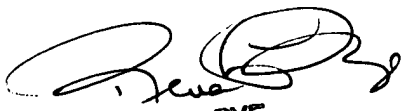
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tamra L. Dicus  
Examiner  
Art Unit 1774

12/17/04



RENA DYE  
SUPERVISORY PATENT EXAMINER  
A.U. 1774 12/23/04